**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_**

**Study Guide for Honors Genetics Assessment**

**Vocabulary**

Meiosis

Gamete

Zygote

Genotype

Phenotype

Allele

Homozygous

Heterozygous

Carrier

Dominant

Recessive

**Gregor Mendel**

Who was he? Where did he live? When?

What organism did he study? What traits of this organism?

Law of segregation

What does it state?

How does it relate to meiosis?

Law of independent assortment

What does it state?

How is demonstrated in dihybrid crosses

**Punnett squares**

Be able to set up a monohybrid (4-square) or dihybrid (16-square) cross when given information about parents

Be able to give the genotypes and phenotypes of the offspring and the likelihood of each

Be able to work “backwards”; if given information about the offspring, can you give the parental genotypes?

**Patterns of inheritance**

*Autosomal recessive*

What does this mean? How does someone inherit?

Examples?

*Autosomal dominant*

What does this mean? How does someone inherit?

Examples?

*X-linked recessive*

What does this mean? How does someone inherit?

Examples?

*Incomplete dominance*

What does this mean? How does someone inherit?

Examples?

*Co-dominance*

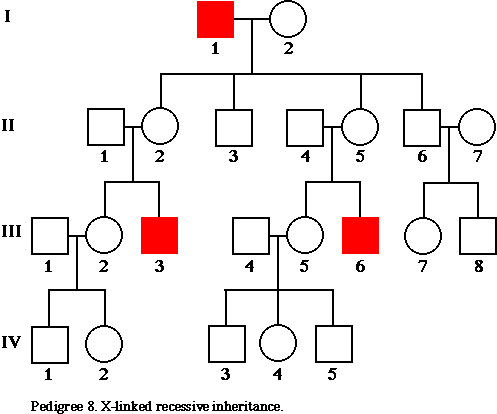
What does this mean? How does someone inherit?

Examples?

**Pedigrees**

Be able to make pedigree

Be able to analyze pedigree. What pattern of inheritance is observed**?**



Ex. The pedigree most likely shows a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

pattern of inheritance because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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